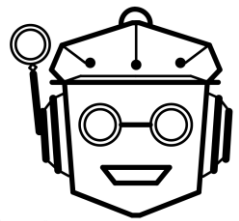
vivo: Is it Victoria In Variable impOrtance detection?

Anna Kozak

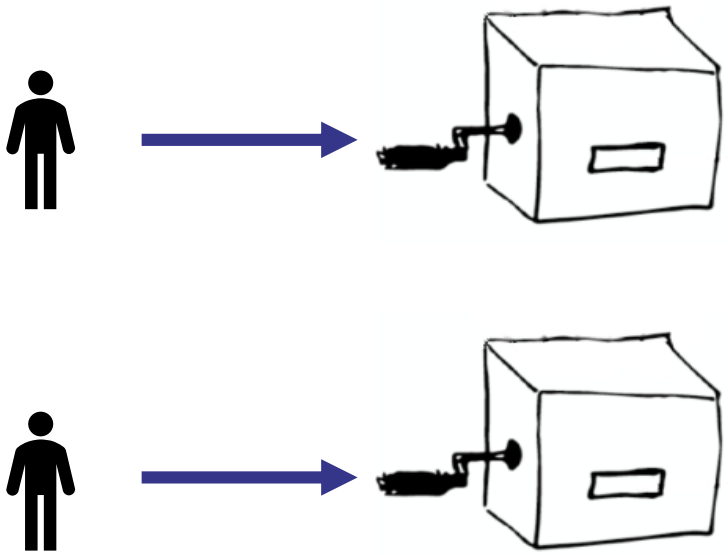
Why R? 2019 Conference, Warsaw, 29 September 2019



MI

BLACKBOX MODEL

- in general better performance than interpretable models
- need less manual work to improve them (e.g. feature engineering)



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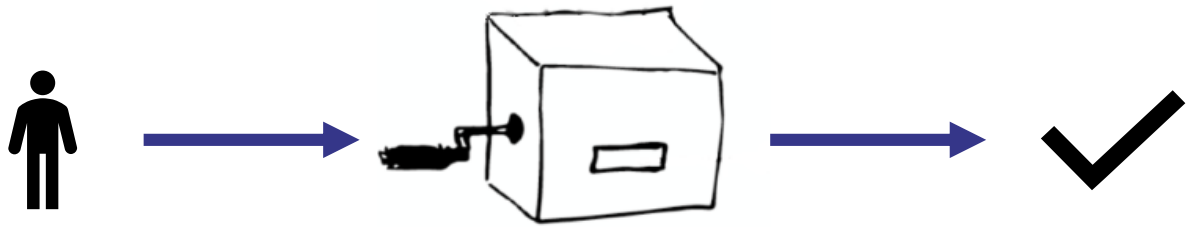
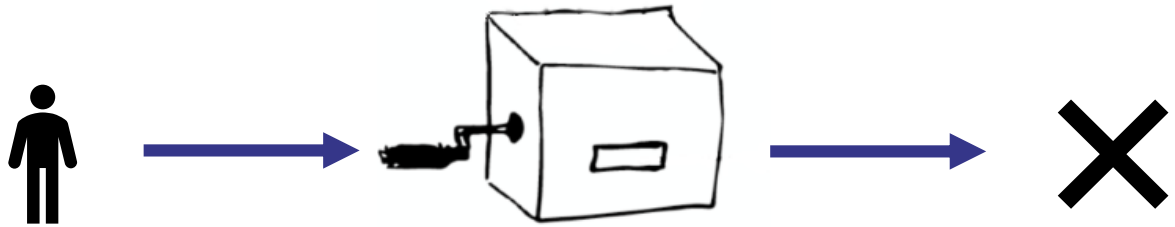
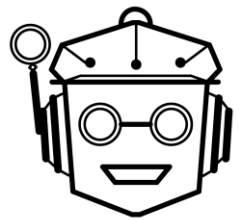


GET LOAN



DO NOT GET LOAN



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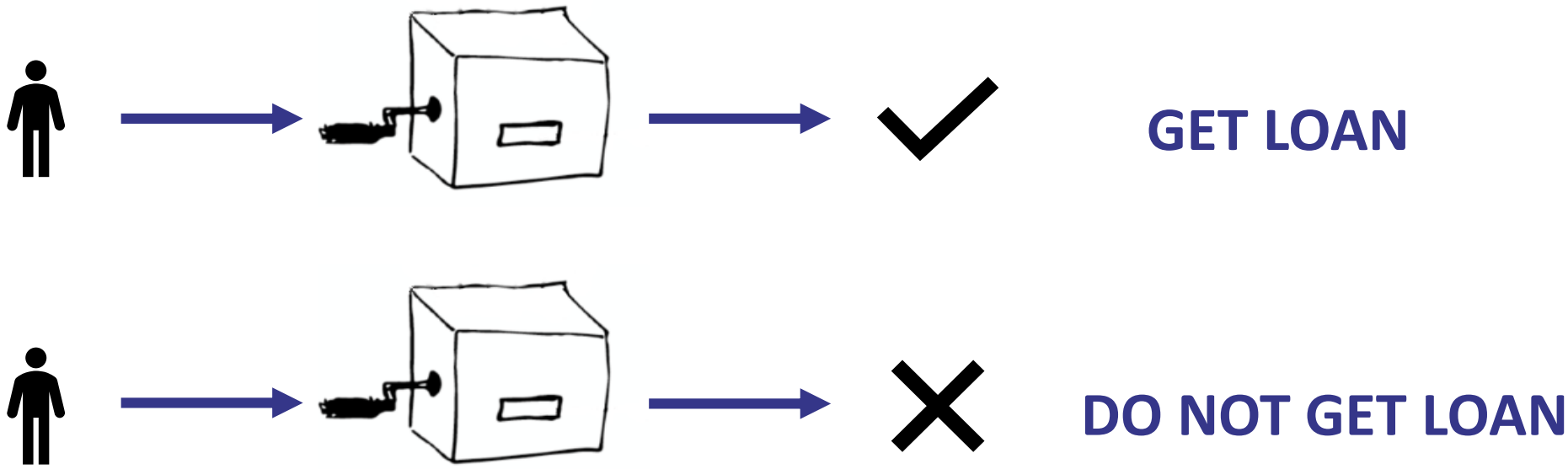
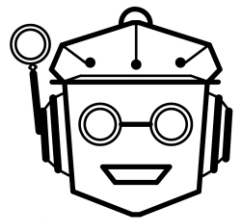


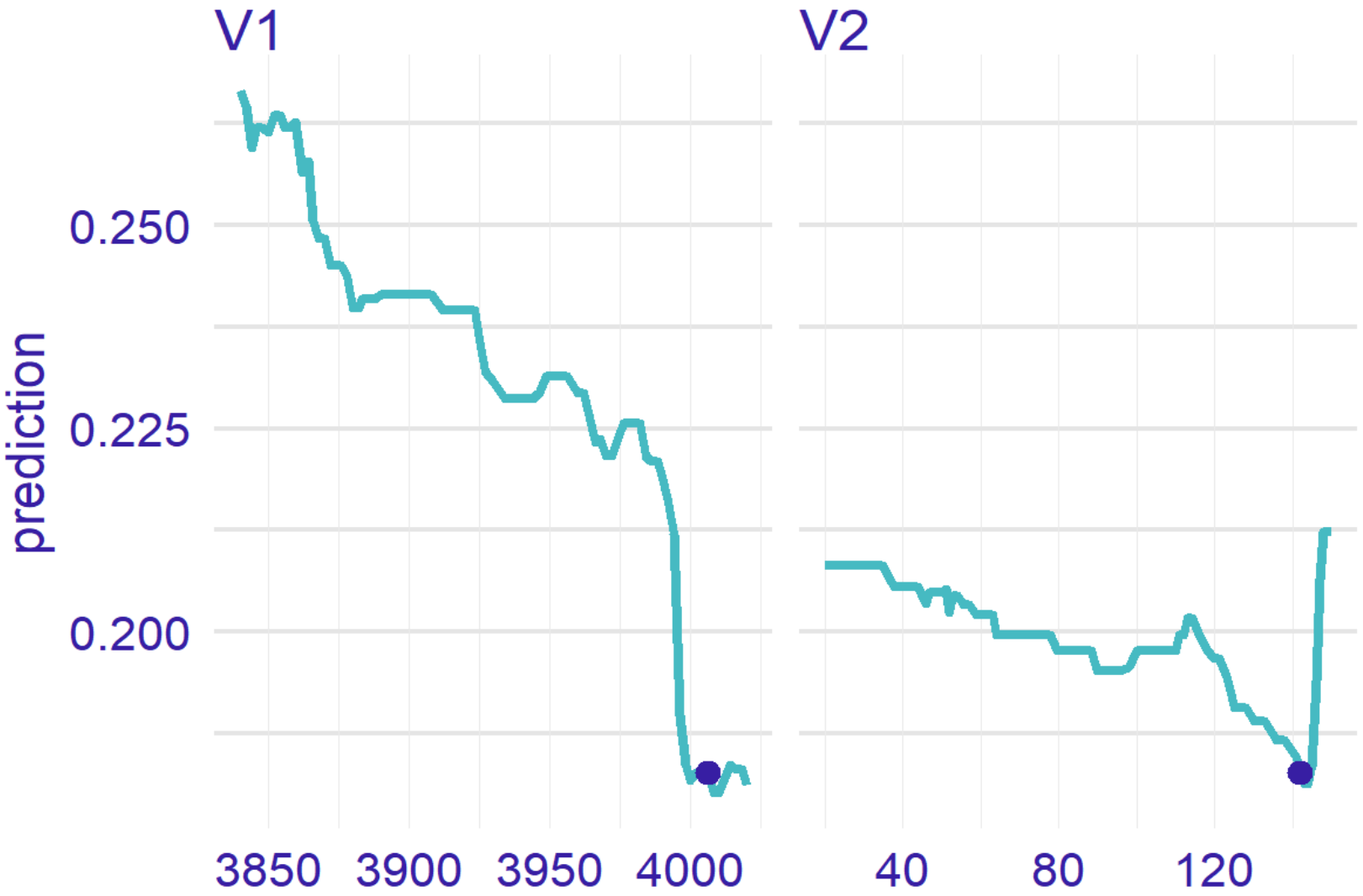
GET LOAN

DO NOT GET LOAN

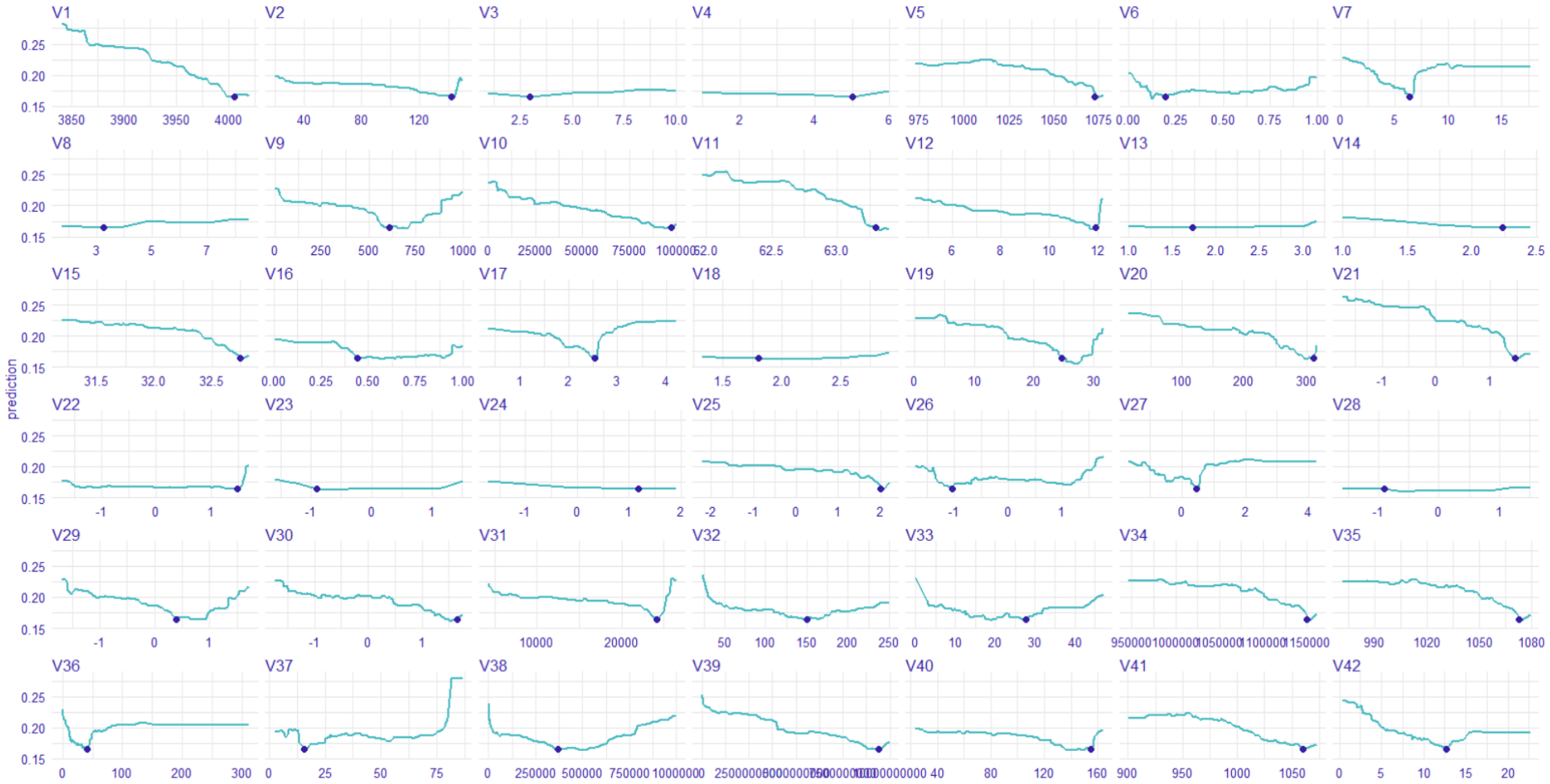
Why didn't I get a loan?



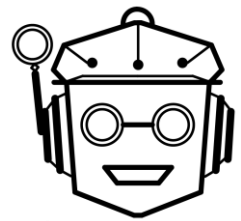
Ceteris Paribus Plot



Ceteris Paribus Plot



What now?



vivo package

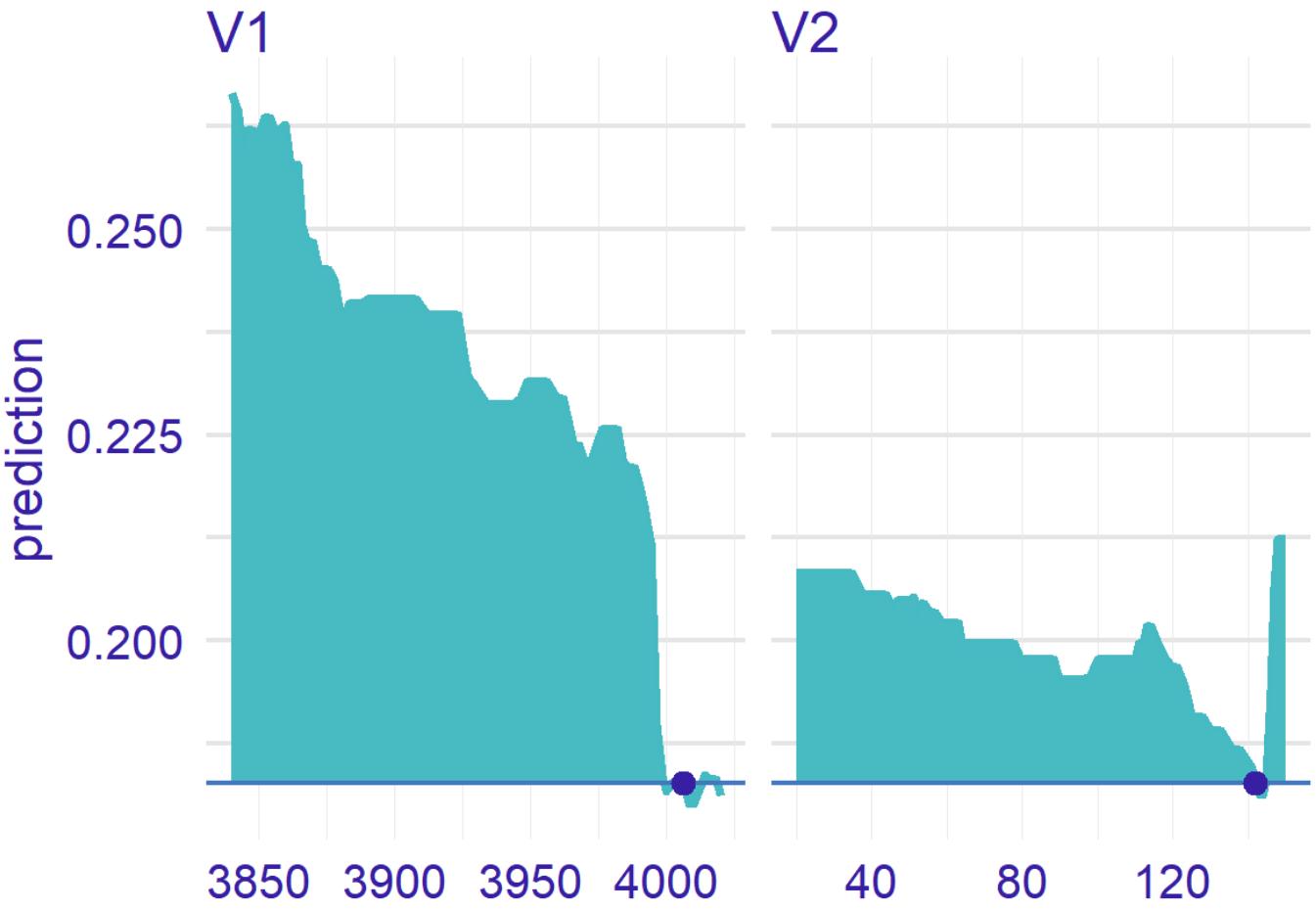
https://github.com/ModelOriented/vivo

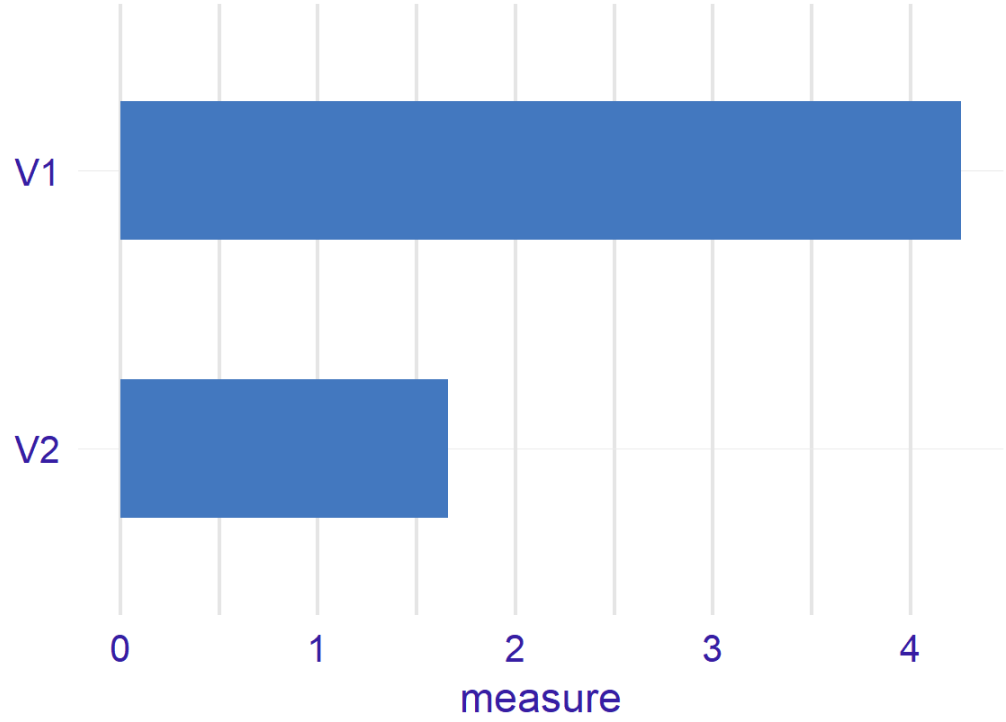
Variable importance measure based on Ceteris Paribus profiles

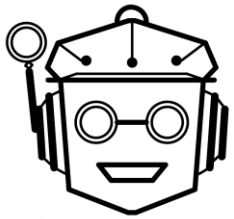
Overview

This package helps to calculate instance level variable importance (local sensitivity). The importance measure is based on Ceteris Paribus profiles and can be calculated in eight variants. Select the variant that suits your needs by setting parameters: `absolute_deviation`, `point` and `density`.

Oscillations



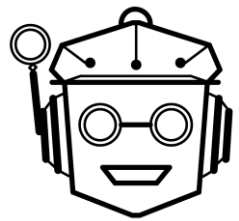




Model Oriented
https://github.com/ModelOriented

MI² Data Lab
https://mi2-warsaw.github.io/

Anna Kozak
https://github.com/kozaka93



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